

CLAIMS

1. A method of automatically generating data regarding errors in a software system, the software system including one or more software components, the method comprising:

5 examining contents of one or more files indicating one or more errors in the software system to determine one or more of the software components responsible for the errors and a number of the errors attributed to each of the software components determined to be responsible for the errors; and

determining a size of the one or more software components responsible for the errors.

10 2. The method as recited in claim 1, further comprising correlating the size of the determined software components with the number of errors attributed to the determined software components, thereby enabling data indicating a probability of errors occurring during execution of a set of software components to be generated from the determined size

15 of the software components determined to be responsible for the errors and the number of the errors attributed to each of the software components determined to be responsible for the errors.

20 3. The method as recited in claim 1, wherein one or more of the files examined comprises a history of one or more errors generated during execution of the software system.

4. The method as recited in claim 3, wherein the contents of one or more files examined further indicates one or more source code modifications made in response to the errors.

5 5. The method as recited in claim 4, wherein determining from the one or more files one or more of the software components responsible for the errors comprises:

 determining from the source code modifications one or more software components
5 modified to correct the errors.

6. The method as recited in claim 1, further comprising:

 ascertaining from the size of the one or more software components a set of software components that are prone to error.

10 7. The method as recited in claim 1, wherein examining contents of one or more files indicating one or more errors in the software system comprises generating a list of one or more errors corresponding to source code changes and a list of one or more files associated with successful attempts to correct the errors.

15 8. The method as recited in claim 7, wherein examining contents of one or more files further comprises correlating a file in the list of files associated with successful attempts to correct the errors with one of the source code changes corresponding to at least one of the list of errors.

20 9. The method as recited in claim 8, wherein wherein the correlating a file in the list of files associated with successful attempts to correct the errors with one of the source code changes corresponding to at least one of the list of errors comprises examining an individual file history for at least one file in the list of files.

10. The method as recited in claim 1, wherein determining a size of the one or more functions responsible for the errors comprises determining start and end lines of a section of code modified to fix an error.

11. The method as recited in claim 10, further comprising converting the start and end lines of a section of code modified to the start and end lines of a current version of a file

12. The method as recited in claim 10, further comprising determining the one or more software components responsible for the errors from the current version of the file.

13. The method as recited in claim 7, wherein the list of files contains information identifying the version of the file and one or more identifiers to identify one or more errors associated with the version of the file.

14. The method as recited in claim 13, wherein the errors corresponding to source code changes are matched against one or more identifiers associated with a file version.

15. The method as recited in claim 1, wherein the errors exceed a certain level of priority.

16. The method as recited in claim 1, further comprising:
identifying one or more files responsible for the errors;
obtaining one or more file histories associated with the files responsible for the errors; and

ascertaining from the file histories the one or more software components responsible for the errors.

17. The method as recited in claim 16, wherein ascertaining from the file histories the one or more software components responsible for the errors further comprises:

ascertaining from the file histories one or more line numbers associated with the software components responsible for the errors.

18. The method as recited in claim 17, wherein ascertaining from the file histories one or more line numbers associated with the software components responsible for the errors comprises:

matching one or more line numbers associated with modified source code against compiled information associated with the source code.

19. The method as recited in claim 18, further comprising:
determining the one or more line numbers associated with the modified source code from one or more error identifiers present in the file histories.

20. The method as recited in claim 18, further comprising:
comparing information associated with one or more versions of the source code to determine the one or more line numbers associated with the modified source code.

21. The method as recited in claim 17, wherein the one or more line numbers associated with the software components responsible for the errors includes a start line and

an end line associated with the software components responsible for the errors, wherein determining a size of the software components responsible for the errors is performed from the start line and the end line associated with the software components responsible for the errors.

5

22. A computer-readable medium storing thereon instructions for automatically generating data regarding errors in a software system, the software system including one or more software components, comprising:

- 10 instructions for examining contents of one or more files indicating one or more errors in the software system to determine one or more of the software components responsible for the errors and a number of the errors attributed to each of the software components determined to be responsible for the errors; and
- instructions for determining a size of the one or more software components
- 15 responsible for the errors.

23. An apparatus for automatically generating data regarding errors in a software system, the software system including one or more software components, comprising:

- means for examining contents of one or more files indicating one or more errors in
- 20 the software system to determine one or more of the software components responsible for the errors and a number of the errors attributed to each of the software components determined to be responsible for the errors; and

means for determining a size of the one or more software components responsible for the errors.

24. An apparatus for automatically generating data regarding errors in a software system, the software system including one or more software components, the method comprising:

5 a processor; and

a memory, at least one of the processor and the memory being adapted for:

examining contents of one or more files indicating one or more errors in the software system to determine one or more of the software components responsible for the errors and a number of the errors attributed to each of the software

10 components determined to be responsible for the errors; and

determining a size of the one or more software components responsible for the errors.